What To Bring

We consider the following items important. You can learn more about them at the workshop, but we made this checklist as a reminder to bring them if you already own them. **Items essential to this workshop are in bold**. You might also consider renting lenses, cameras or other gear from [Lens Pro To Go](https://www.lensprotogo.com)

or other rental companies.

Contact Mark Bowie at [mbowiephoto@gmail.com](mailto:mbowiephoto@gmail.com) or

Chris Murray at [chris@chrismurrayphotography.com](mailto:chris@chrismurrayphotography.com) with questions.

**Photo Equipment**

**Camera** – DSLR or mirrorless, full frame or cropped sensor. Also, bring the **camera manual** should you need to consult it.

**Lenses** – There will likely be photo opportunities for your full range of lenses, from extreme wide angle to telephoto and macro. We use lenses from 10-400mm. When buying lenses we recommend getting the best quality you can afford, with maximum apertures of f/2.8 or wider for landscape work (especially useful for night photography).

**Non-abrasive Lens Cleaning Cloth and Wipes.**

**Tripod** – Sunrise, sunset, twilight and nighttime light levels are too low to photograph properly without a *sturdy* tripod. We recommend buying a lightweight carbon fiber tripod (we like Induro and Gitzo brands) with a ball head. Expect to pay $300-$400 for the set. Watch [Hunt’s Photo](http://www.huntsphotoandvideo.com) for sales. A quality set should last many years.

**Lots of Memory Card Storage** – We use fast 64GB cards, good for stills & video.

**Camera Battery Charger and Extra Batteries.**

**Sensor Cleaning Tools** — To remove dust and debris from the sensor. We use Eclipse solution and Sensor Swabs Ultra from [Photographic Solutions](http://photosol.com/products/).

**Polarizing filter (s) to fit each of your lenses.**

Neutral Density Filters, Graduated Neutral Density Filters – Mark uses [Tiffen](https://tiffen.com/tiffen-filters/) 3- and 6-stop IR-ND neutral density filters, and the [Singh-Ray](http://www.singh-ray.com) 8-stop Vari-ND filter. He also recommends a set of 3 [Haida](http://www.haidausa.com/products/neutral-density-filters.html) round screw-in ND filters (with 3-, 6-, and 10-stop filters) for about $120. They have minimal color casting. Mark also uses [Singh-Ray](http://www.singh-ray.com) 2-stop soft- and 3-stop hard-edge graduated filters.

**Shutter Release** ­­– You can use a locking cable release, a wireless remote, or the camera’s self-timer (except in BULB). Shutter releases are available for specific camera models, from simple units that only trip the shutter, to more advanced units with intervalometers that allow the photographer to program exposure time, count down the exposure, shoot multiple exposures and timed intervals. These are available from [Hunt’s Photo](http://www.huntsphotoandvideo.com) and [B&H Photo-Video](https://www.bhphotovideo.com). Mark uses the [Vello Shutterboss](https://www.bhphotovideo.com/c/search?Ntt=Vello%20Shutterboss%20&N=0&InitialSearch=yes&sts=ma&Top+Nav-Search=) III ($99) wireless intervalometer for shooting time-lapses.

**Flashlight &/or Headlamp** – preferably with a red light, or cover with a red filter, to limit distracting others during night photography sessions. Bring small LED flashlights (We like those from [Coast](https://coastportland.com/) and [Fenix](https://www.fenixlighting.com/)) larger lights for light painting if you’d like.

**Rain Cover** – For camera and lens protection. An inexpensive plastic shower cap works well in many instances. Mark uses [Op-Tech plastic rain sleeves](https://optechusa.com/rainsleeve.html) that have a drawstring at one end and that slide over camera & lenses. A set of 2 costs about $6.

**Battery-powered Alarm Clock/Watch** – In case cell phone service isn’t available. It’s better to bring your own alarm than miss a morning shoot!

Cell Phone.

**Computer Equipment**

**Laptop Computer** – We highly recommend bringing your own laptop computer for downloading, processing and viewing your images. If you borrow a laptop, make sure that you are familiar with its use.

**Processing Software** – Good choices include [Adobe](https://www.adobe.com) Lightroom, Photoshop, or Elements. We use [Adobe’s Creative Cloud Photography Plan](https://www.adobe.com/creativecloud/plans.html?promoid=6NCS7DGT&mv=other), which includes Lightroom & Photoshop, for about $10/month. Free 30-day trials of these programs are available.

To create time-lapse movies, you may also want the following software:

1. Lightroom. A free trial version is available at <http://www.adobe.com/downloads.html>

2. Photoshop. A free trial version is available at <http://www.adobe.com/downloads.html>

3. LRTimelapse: The free download will allow you to load up to 400 images: <https://lrtimelapse.com/download/>. Particularly good at reducing flicker in daytime time-lapses.

To play the movie: iMovie or VLC Media Player for the Mac, or Windows Movie Maker.

Back-up device – Such as an external hard drive.

Flash Drive – For sharing images.

**Clothing & Outdoor Gear**

Historical average temperatures for Tupper Lake, NY in September vary from a low of 44 to a high of 67 degrees. It’s preferable to dress in several warm layers as temperatures can change significantly and quickly.

**Warm Coat and Pants**

Fleece Under Layer – Can be added or removed as the temperature changes.

**Rain Jacket & Rain Pants** – For rain and wind protection.

**Hat, gloves**

**Hiking Boots** (preferably waterproof) & **several pair warm socks**

Wading boots or sandals– For photographing in the waters.

Dress for the indoor sessions will be casual.

Water bottle.

Energy bars or other snacks.